

The present authors have the requisite experience on which to draw, and a knack of using it pleasantly. They might have made larger demands on our patience than they have without risk of overstraining it.

It is to be understood that anyone who rules his fishing by this book surrenders himself to north-country ideas. For instance, he uses lightly dressed patterns, he learns to talk of "bloas," he renounces such tried favourites as the "blue up-right" or the "coch y bonddu," becomes, in short, wedded to a particular convention. He might have to contract a similar alliance in other districts—in the Lake country, where they have "bleas," among the "bumbles" of Derbyshire, or when taking to the "half-stones" and "pheasant-tails" of the West.

Probably there is little loss of efficiency involved in such a surrender, but it is not wholly satisfactory for all that. A consideration of the various local conventions of pattern induces the reflection that there is a good deal of unnecessary confusion, some waste of effort, and some sacrifice of intelligence caused by the present system of local "water-tight compartments." Roughly, the insect life of all wet-fly streams is the same, whatever their district. Roughly, also, the intentions of all local fly-tiers are the same, to imitate those insects. But local nomenclature and idiom have largely obscured this. It would be a valuable, and we should say an extremely interesting, task for some competent fly-dresser and angler to collate all the local patterns, to select the best imitations without respect of districts, and to attempt a standardisation of wet flies which should include whatever is most worth having. Ronalds, of course, did something of the kind, and did it very well, but that was a long time ago. Since then we have had Mr. Halford's invaluable work on chalk-stream flies, and Mr. Skues's revelations on nymphs. So there are more data for such a work as is suggested.

GERMANY AND RACIAL CHARACTERS.

The Germans: (1) The Teutonic Gospel of Race; (2) The Old Germany and the New. By J. M. Robertson. Pp. viii+291. (London: Williams and Norgate, 1916.) Price 7s. 6d.

IN the first part of his book Mr. Robertson gives an admirable and timely exposition of the crude falsity of certain current doctrines of race. The much-used "Aryan," if understood ethnologically, is almost meaningless; all that we know is that certain peoples speak Aryan languages. We do not know that those peoples, *e.g.*, in Europe, are the descendants of the invaders who brought the original Aryan speech. Similarly with skull-measurement. Many writers have claimed a generic superiority for the long-headed type—which, according to Gobineau, is that of the Teuton warrior—regardless of insuperable difficulties. For example, the Swedes are dolichocephalic, and they are not a leading nation; worse still, it is found that their best individuals are less dolichocephalic than the average. And

dolichocephaly is characteristic of the negro, the Eskimo, and the gorilla. Equally fallacious is the Germans' claim that their ancestors were exceptional in their considerate treatment of women; Plutarch proves that the Ligurians excelled them, as the North American Indians did later on. Indeed, all talk about "Germanic" virtues is absurd if its aim is to glorify Germany; for East Germany is partly Slav, and Belgium and North-east France are ethnologically more Germanic than Bavaria.

Part ii. traces the process by which the Germany of Kant and Herder and Goethe became the Germany of Treitschke, Bernhardi, and the author of "The Hymn of Hate." Mr. Robertson gives an excellent historical survey, and, coming to recent times, quotes telling proofs of Germany's scheming for Britain's downfall from the writings of Prince von Bülow and other statesmen. It is clear enough now that only our supremacy at sea saved us from attack in 1900. The great blunder of Germany in 1914 was in supposing that Britain would not fulfil her treaty obligations to Belgium. Having no principles herself, no recognition of international morality, she expected a similar lack in others. Formerly few of us could believe in her criminal attitude. Now she has opened our eyes, and we see that her power must be crushed before stable peace in Europe can be hoped for.

OUR BOOKSHELF.

The Value of Science in the Smithy and Forge. By W. H. Cathcart. Pp. xiv+163. (London: Charles Griffin and Co., Ltd., 1916.) Price 4s. net.

THIS handy volume is a welcome addition to the metallurgical series already issued by the same publishers. It is written by a practical smith, who is president of the Associated Foremen Smiths of Scotland. The object is to impress upon young craftsmen the value and importance of some scientific knowledge. The earlier part of the book, or about one-fourth in all, contains examples of calculations relating to forgings and simple mathematical and geometrical problems applied to practical cases. The remaining portions of the volume are those which will probably attract more attention. The subjects dealt with include metallography, heat treatment of iron and steel, the chemistry of welding, and case-hardening. In these subjects the author has acquired a skill which is altogether exceptional in a practical smith, and he writes with an enthusiasm and intimate knowledge which should commend the volume to a wider circle of readers than that for which it was originally intended.

Dr. Stead has contributed a short introduction to the volume and has taken much interest in its production. Mr. Cathcart has proved an apt pupil of Dr. Stead, upon whose researches he largely draws. References to the work of Rosenhain, Ewing, Sauveur, and others make the account more complete. It assumes some previous knowledge on the part of the young craftsman, which

he may not possess; but for those who can follow it the book should be full of charm, of interest, and of real utility. T. T.

More Minor Horrors. By Dr. A. E. Shipley. Pp. xiv + 163. (London: Smith, Elder and Co., 1916.) Price 1s. 6d. net.

THIS little volume is to be regarded as a sequel to the author's "Minor Horrors of War," and, like the latter, is written in a style calculated to entertain and instruct the layman. Dr. Shipley's innate humour leavens the "horrors" that are commonly associated with the subjects which he treats of, but at the same time he imparts information which is both accurate and up to date.

The book opens with a dissertation on the ubiquitous cockroach and its various phases of activity. The following chapter treats of the ox warble-fly, the larva of which, by destroying the continuity of the integument of our oxen, affects detrimentally an important munition of war. Mosquitoes come in for a very full share of treatment, with special reference to those which serve as carriers of malaria and yellow fever. The extension of the war into Asiatic Turkey may have possibly suggested to the author the inclusion of the fig moth in the present volume, and to dilate on the ravages it entails among the chief product of Smyrna. Among other topics the common stable fly is well described, and timely reference is made to the rôle which it may very likely perform in the spread of infantile paralysis.

The book is well printed and illustrated, and for the modest expenditure of eighteenpence we can glean an insight into the ways and means of some of the undesirable companions of our countrymen now fighting in divers lands and seas.

A. D. IMMS.

Rhizopod Protozoa. The Causes of Cancer and Other Diseases, being Part iv. of "Protozoa and Disease." By J. J. Clarke. Pp. xiv + 187. (London: Ballière, Tindall and Cox, 1915.) Price 7s. 6d. net.

IN this book the author brings together data and observations which he considers enable him to state definitely that cancer and certain other diseases are caused by protozoa belonging to the same group of organisms as the Mycetozoa. The author has studied the mycetozoon *Dydimum difforme*, and believes that similar structures and developmental forms are met with in it and in cancers, molluscum, etc., from which he concludes that these appearances in the latter must be due to a parasite of the same botanical or zoological position as the mycetozoon. He similarly holds that the Negri bodies of rabies, the trachoma bodies, the Councilman bodies of small-pox, etc., are the actual parasites, and are protozoa, and are not, as is usually held, the "garments" enclosing an ultra-microscopic organism.

Mr. Jackson Clarke is well known for his pronounced views on the cancer question, but so far he has failed to carry conviction, and we doubt if this work will do much to advance his propaganda. The book is lavishly illustrated by a number of beautiful drawings.

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LETTERS TO THE EDITOR.

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Economic Geology and an Imperial Bureau of Scientific Intelligence.

THE subject of Sir R. Hadfield's address to the Ferrous Section of the Metallurgical Committee of the Advisory Council for Scientific Research (see NATURE, May 25, p. 264) is of much interest.

As far back as 1901 the Department of Agriculture and Technical Instruction for Ireland, recognising the need for obtaining information as to the economic raw materials which would be worthy of development in Ireland, decided to appoint a practical man trained in this special work. I had the honour to be the person appointed as their economic geologist.

The inquiry thus begun has resulted in furnishing considerable data as to the mineral industries already existing, and as to mineral deposits capable of development. Some progress has been made, the exports of raw materials (stones, slates, metal ores) having risen in value from 380,188l. in 1909 to 524,458l. in 1914. In the course of the inquiry a comprehensive collection of mineral raw materials, building stones, etc., was got together and shown at various exhibitions in Ireland, also at the Imperial Institute, London, and at the St. Louis Exposition, U.S.A., with the object of attracting capital to develop the deposits, finding a market for the materials already being worked, etc. The Department has thus organised what is in effect a bureau of investigation and information upon the economic side of the mineral resources of the country. Through this bureau the Department give a degree of assistance in the form of inquiry and information which goes as far as is deemed proper to Government action in any country, and of a kind which is not furnished by Government departments elsewhere in the United Kingdom.

I am in thorough agreement with Sir R. Hadfield in his proposal for the establishment of a central bureau of information as to the materials existing within the British Empire. I well know the need for such a bureau, which, in my opinion, should also collect information regarding materials exported from enemy countries, and which might be replaced by our own products. Since the beginning of hostilities I have been engaged in special inquiries and experiments, having in view, amongst other purposes, the finding of possible substitutes for raw materials imported from enemy countries, and if such a bureau had been in existence it would have been of much assistance in this work. I have had an opportunity of visiting the Philadelphia Commercial Museum, and the Commercial Museum, Brussels, and much appreciate the advantages of these institutions.

A circumstance in Irish conditions which tends considerably to facilitate the work of State action in the development of minerals is the fact that under the Land Purchase Acts of 1903 and subsequent years the mineral rights of the land sold are, as a rule, vested in the Irish Land Commission. The Department work in this matter in close co-operation with the Land Commission, my services being placed by special arrangement at the disposal of this body. The policy regarding the leasing of mineral rights is to give fair and equitable terms to the prospector.

E. ST. JOHN LYBURN.

4 Upper Merrion Street, Dublin, June 19.